Mumbai University

Question Paper

[CBSGS – 75:25 Pattern]
(October – 2015)

Paper - III

Data

Warehousing

Time: 2 ½ Hours $\hspace{6cm}$ **Total Marks:** 75

N.B.: (1) *All Question are Compulsory.*
$\hspace{1cm}$ **(2)** *Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.*
$\hspace{1cm}$ **(3)** *Answer To The Same Question Must Be Written Together.*
$\hspace{1cm}$ **(4)** *Number To The Right Indicates Marks.*
$\hspace{1cm}$ **(5)** *Draw Neat Labeled Diagrams Wherever Necessary.*
$\hspace{1cm}$ **(6)** *Use of Non – Programmable Calculator is allowed.*

Q.1 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Differentiate between Star Schema and Snowflake Schema. **(5)**
(B) Explain Slowly Changing Dimensions (SCD) and its type with example. **(5)**
(C) List and explain the characteristics of Data Warehouse. **(5)**
(D) Differentiate between Operational System and Informational System. **(5)**

Q.2 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Draw and explain the OWB Architecture. **(5)**
(B) Write the steps to Import Metadata from a file. **(5)**
(C) What is the purpose of Design Centre? Explain the following Windows: **(5)**
$\hspace{1cm}$ **(i)** *Project Explorer Window*
$\hspace{1cm}$ **(ii)** *Connection Explorer Window*
(D) How Source Metadata can be defined manually with Data Object Editor? **(5)**

Q.3 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Write a short note on Dimensional Modeling. **(5)**
(B) What is Module? Explain Source Module and Warehouse Target Module. **(5)**
(C) Differentiate between Relational Model (star schema) and Multidimensional Model. **(5)**
(D) Explain the procedure for creating cube in OWB. **(5)**

Q.4 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Write a short note on ETL (Extract, Transform and Load). **(5)**
(B) What is difference between Data Object Editor and Mapping Editor (Canvas)? **(5)**
(C) Explain the following operators: **(5)**
$\hspace{1cm}$ **(i)** *Cube Operator*
$\hspace{1cm}$ **(ii)** *Dimension Operator*
$\hspace{1cm}$ **(iii)** *External Table Operator*
$\hspace{1cm}$ **(iv)** *Table Operator*
(D) Write the steps to connect source table to target using Joiner Operator with example. **(5)**

Q.5 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Write the steps to create New Mapping and Adding Source and Target Tables. **(5)**
(B) What is Transformation Operator? How is UPPER() Transformation function used? **(5)**
(C) Write the procedure to create and to load a lookup table. **(5)**
(D) Write the steps for validating and generating in Design Center and Mapping Editor. **(5)**

Q.6 **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A) Write a short on Metadata Change Management. **(5)**
(B) Explain Multidimensional Database Architectures with suitable diagram. **(5)**
(C) What is the purpose of snapshots? Explain the steps to create a new snapshots. **(5)**
(D) Explain Real-Time Analytical Processing. **(5)**

[TURN OVER]

Q.7 **ATTEMPT ANY THREE QUESTIONS: (15 MARKS)**

(A) Draw and explain Data Warehouse Architecture. **(5)**

(B) List and explain the steps to configure the repository and workspaces. **(5)**

(C) Explain creating a Time Dimension with the Time Dimension Wizard. **(5)**

(D) What is staging in Data Warehouse? List and advantages and disadvantages of staging. **(5)**

(E) Explain the Object Details Window. **(5)**

(F) What is MOLAP? List and advantages of MOLAP over ROLAP. **(5)**